WHAT IS CLAIMED IS:

1. A semiconductor integrated circuit comprising:

a receiving circuit unit for separating a multiplex electrical input signal from a first input port into electrical channel signals on a plurality of channels, delivering said separated electrical channel signals to a first output port, and generating a clock signal from said multiplex electrical input signal;

a loopback path for taking out part of each of said separated electrical channel signals from said receiving circuit unit;

a selector for receiving each of said separated electrical channel signals via said loopback path and a plurality of input electrical channel signals fed from a second input port, and selecting said separated electrical channel signals from said second input port or said input electrical channel signals from said loopback path depending on a test mode signal fed from a switch port; and

a transmitting circuit unit for multiplexing an output from said selector in a time sharing manner to produce a multiplex electrical output signal, and delivering said output signal to a second output port, said receiving circuit unit, said loopback path, said selector and said transmitting circuit unit being formed on a single semiconductor chip, whereby said semiconductor integrated circuit can be tested in a

test mode.

2. A semiconductor integrated circuit according to claim 1, further comprising:

another loopback path for taking out part of said clock signal generated from said receiving circuit unit; and

another selector for receiving said generated clock signal via said other loopback path and a reference clock signal from a reference clock port, and selecting said generated clock signal from said other loopback path or said reference clock signal from said reference clock port depending on said test mode signal fed from said switch port, said other loopback path and said other selector being formed on said single semiconductor chip.

3. A semiconductor integrated circuit according to claim 2, wherein said transmitting circuit unit includes:

a clock generation circuit for generating an operation clock signal on the basis of said generated clock signal from said other selector;

a first-in first-out type buffer arranged to operate in synchronism with said operation clock signal from said clock generation circuit in order to absorb differences between timing change in said plurality of electrical input signals fed from said second input port; and

a multiplexer for multiplexing said plurality

of clocked electrical signals from said buffer in a time sharing manner.

4. A semiconductor integrated circuit according to claim 3, further comprising:

an output buffer connected between said first output port and said receiving circuit unit; and

an input buffer connected between said second input port and said transmitting circuit unit, said output buffer and said input buffer being formed on said semiconductor chip, said two loopback paths being both connected between a junction of said output buffer and said receiving circuit unit and a junction of said input buffer and said transmitting circuit unit.

5. An optical communication module comprising:

an opto-electrical conversion unit for converting a multiplex optical input signal from an optical fiber into a multiplex electrical input signal;

a semiconductor integrated circuit including a receiving circuit unit for receiving said multiplex electrical input signal via a first input port, separating said input signal into electrical channel signals on a plurality of channels, delivering said separated electrical channel signals to a first output port, and generating a clock signal from said multiplex electrical input signal, a loopback path for taking out part of each of said separated electrical channel signals from said receiving circuit unit, a selector for receiving said separated electrical channel signals

via said loopback path and a plurality of input electrical signals fed from a second input port, and selecting said separated electrical channel signals from said second input port or said input electrical channel signals from said loopback path depending on a test mode signal fed from a switch port, and a transmitting circuit unit for multiplexing an output from said selector in a time sharing manner into a multiplex electrical output signal, and delivering said output signal to a second output port, said opto-electrical conversion unit, said receiving circuit unit, said loopback path, said selector, and said transmitting circuit unit being formed on a single semiconductor chip;

an electro-optical conversion unit for converting said multiplex electrical output signal fed from said second output port of said semiconductor integrated circuit into a multiplex optical output signal, whereby said optical communication module can be tested in a test mode.

6. A semiconductor integrated circuit having a transceiver comprising:

a first input port for receiving a multiplex electrical input signal;

a plurality of second input ports for receiving a plurality of electrical data input signals;

a switch port for receiving a test mode signal;

a receiving circuit unit having a function to separate said multiplex electrical input signal received via said first input port to produce a plurality of data signals;

a plurality of first output ports for delivering said plurality of data signals produced from said receiving circuit unit;

a loopback path with one end coupled to an output of said receiving circuit unit;

a selector arranged to be controlled by said test mode signal fed via said switch port, to receive said plurality of electrical data input signals via said plurality of second input ports, to be connected to another end of said loopback path to receive said plurality of data signals generated from said receiving circuit unit, to normally select said plurality of electrical data input signals from said plurality of second input ports, and when receiving said test mode signal via said switch port, to select said plurality of data signals generated from said receiving circuit unit;

a transmitting circuit unit having a function to multiplex electrical data signals selected by said selector to produce a multiplex electrical output signal; and

a second output port for delivering said multiplex electrical output signal generated from said transmitting circuit unit, said first input port, said

plurality of second input ports, said switch port, said receiving circuit unit, said plurality of first output ports, said loopback path, said selector, said transmitting circuit unit and said second output port being formed on a single semiconductor chip, whereby said transceiver can be tested in a test mode.

7. An optical communication module comprising:

a converter for converting a multiplex optical input signal into a multiplex electrical input signal;

a transceiver having a first input port for receiving said multiplex electrical input signal, a plurality of second input ports for receiving a plurality of electrical data input signals, a switch port for receiving a test mode signal, a receiving circuit unit having a function to separate said multiplex electrical input signal received via said first input port into a plurality of data signals to generate said plurality of data signals, a plurality of first output ports for delivering said plurality of data signals generated from said receiving circuit unit, a loopback path with one end coupled to an output of said receiving circuit unit, a selector arranged to be controlled by said test mode signal via said switch port, to receive said plurality of electrical input signals via said plurality of second input ports, to be connected to another end of said loopback path to receive said plurality of data signals generated from

said receiving circuit unit, to normally select said plurality of data input signals from said plurality of second input ports, and when receiving said test mode signal via said switch port, to select said plurality of data signals generated from said receiving circuit unit, a transmitting circuit unit having a function to multiplex electrical data signals selected by said selector to generate a multiplex electrical output signal, and a second output port for delivering said multiplex electrical output signal generated from said transmitting circuit unit, said first input port, said plurality of second input ports, said switch port, said receiving circuit unit, said plurality of first output ports, said loopback path, said selector, said transmitting circuit unit and said second output port being formed on a single semiconductor chip; and

another converter for converting said multiplex electrical output signal from said second output port of said transceiver into a multiplex optical output signal, whereby said optical communication module can be tested in a test mode.

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